



INSTRUCTION MANUAL

WATERPROOF ACQUISITION MODULE

Model SL

© Roctest Limited 2014. All rights reserved

This product should be installed and operated only by qualified personnel. Its misuse is potentially dangerous. The Company makes no warranty as to the information furnished in this manual and assumes no liability for damages resulting from the installation or use of this product. The information herein is subject to change without notification.

Tel. : 1.450.465.1113 • 1.877.ROCTEST (Canada, USA) • 33 (1) 64.06.40.80 (Europe) • www.roctest.com • www.telemac.com



TABLE OF CONTENTS

1	DESCRIPTION	2
2	SPECIFICATIONS	5
3	CHANGING THE BATTERY PACK	5
4	INITIAL SET UP.....	6
5	CONNECTING SENSORS TO THE SL UNIT	6
6	GETTING THE DATA	7

1 DESCRIPTION

The SL Series is an interface module designed to read data from sensors (electrical and/or vibrating wire) installed in a borehole. Even when water is a factor, the module can be configured to meet most project specifications.

The applications of the SL modules include:

- Data acquisition of civil engineering sensors in a special location or under special conditions.
- Reading extensometers, piezometers or in-place inclinometer sensors in harsh environments.
- Reading sensors in a manhole in the middle of a roadway or runway with an in-road antenna at the surface .

The PVC waterproof design is ideal for applications where extensometers, piezometers or in-place inclinometer sensors need to be read at a location completely flush with the surface. The battery pack is installed in an isolated housing at the bottom to allow easy access for battery replacement.

The module can also be used as a standalone logger. An example of a typical application is installing the datalogger in a manhole in the middle of a roadway or runway with an in-road antenna at the surface. The antenna is waterproof, robust and resistant to many chemical products like oil or gasoline. A base station located in a safe location, outdoors or indoors, will be able to receive the data.

Depending on the model used, the required accessories include:

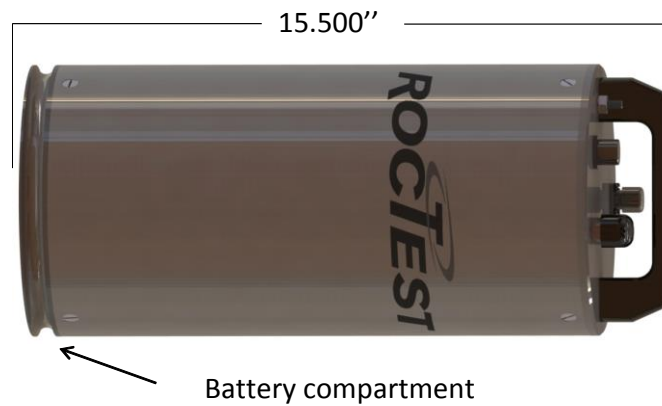
- Connecting cable for piezometers
- Connecting cable for extensometers
- Connectors for In-Place Inclinometer
- Extra battery pack
- 3dB In-Road Antenna

Standard Model			
Model	Sensors	Radio	Logging capacity
SL-6VW-RL	6 vibrating wires	Yes	Yes
SL-6VW-RX	6 vibrating wires	Yes	No
SL-6VW-L	6 vibrating wires	No	Yes
SL-2VW-RL	2 vibrating wires	Yes	Yes
SL-2VW-RX	2 vibrating wires	Yes	No

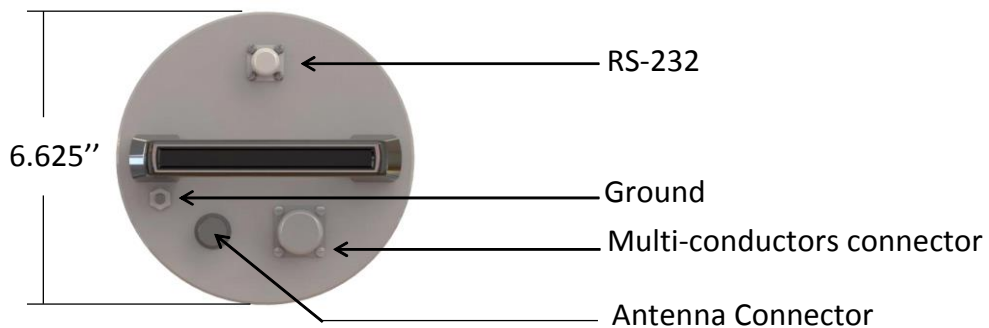
SL-2VW-L	2 vibrating wires	No	Yes
SL-IPI-RL	In-Place Inclinator	Yes	Yes
SL-IPI-L	In-Place Inclinator	No	Yes
SL-6AN-RL	6 analog sensors	Yes	Yes
SL-6AN-L	6 analog sensors	No	Yes
SL-2AN-RL	2 analog sensors	Yes	Yes
SI-2AN-L	2 analog sensors	No	Yes

List of standard models for SL Module

The basic features and dimensions are the following:



Side view of SL Module



Top of the SL module



Typical installation showing the
SL Module with an MPBX

2 SPECIFICATIONS

Physical / environmental

Dimensions:	171 x 381 mm
Water resistance:	300 kPa (IP68)
Battery life:	1 year with one reading and one transmission per day

Analog reading

Accuracy:	+/-0.12% of F.S.
Resolution:	0.03% of F.S.

Vibrating wire

Resolution:	0.001 Hz RMS
Accuracy:	+/- 0.013% of F.S.

Radio module (RL or RX model)

Frequency:	910 to 918 MHz
Baud rates:	from 1200 to 38.4 kbps

3 CHANGING THE BATTERY PACK

For replacing the battery pack you need to open the battery compartment located at the bottom of the unit by removing these flat-head screws:



- Then disconnect the power pack, replace it and re-connect the new battery pack.
- Put some 0-ring grease on the o-ring located on the cap
- Put everything back in place and pay attention to the wires and connectors when you push the cap in place



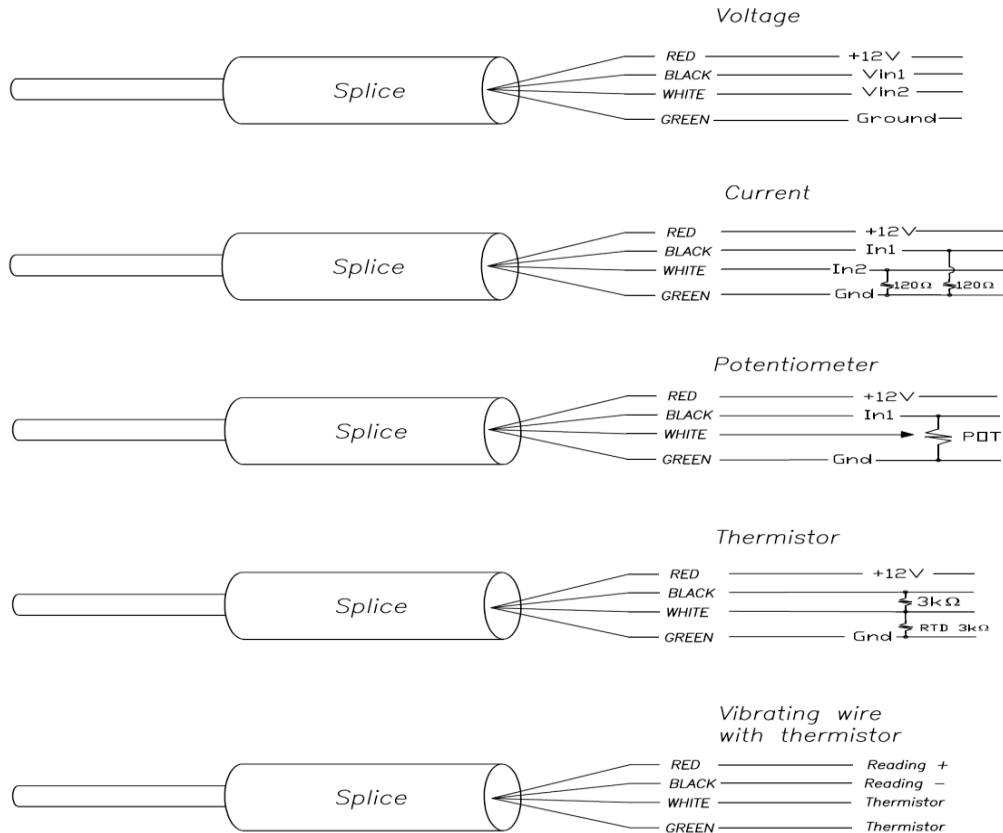


4 INITIAL SET UP

To set up the SL unit for the first time, you need to install the free software PC200W from Campbell Scientific on your computer (with the CD supplied with the unit). Then, please refer to the manual “Quick Start for CR1000 and CR800” also on the CD.

5 CONNECTING SENSORS TO THE SL UNIT

This section shows how to connect various sensors to the SL unit, according to the specific types of sensor:



The following figure shows the connection between multiple sensors with the SL module using the Connecting Cable for individual sensors. The connecting cable can hook on up to 6 sensors and everything is fully waterproof.



6 GETTING THE DATA

The manual “Quick Start for CR1000 and CR800” within the CD shows you an easy way to retrieve the data from the SL unit to a computer, in an Excel spreadsheet. There are other ways of retrieving the data (automated, forced) when using Loggernet software from Campbell. Please refer to their manual for more information.